

CLAIMS

- 1 1. A door system comprising, a sectional door having adjacent panels hinged for
2 moving between a closed vertical position and an open horizontal position, said
3 adjacent panels including at least a top panel, an intermediate panel, and a bottom
4 panel, sets of lower rollers provided proximate the interfaces of said adjacent
5 panels and proximate the lower extremity of said bottom panel, upper rollers
6 carried proximate the upper extremity of said top panel, vertical track assemblies
7 including vertical track sections and reverse angles, said reverse angles
8 interconnecting with a header to form a door mounting system, transitional track
9 members having first track sections and second track sections, and dual
10 horizontal track assemblies having lower horizontal track sections and upper
11 horizontal track sections, wherein said lower rollers are carried by said vertical
12 track sections, said first track sections, and said lower horizontal track sections,
13 and said upper rollers are carried by said second track sections and said upper
14 horizontal track sections.
- 1 2. A door system according to claim 1, wherein said vertical track sections, said
2 transitional track members, and said dual horizontal track assemblies form a track
3 system, said track system having a first roller raceway adapted to carry said lower
4 rollers and a second roller raceway adapted to carry said upper rollers.
- 1 3. A door system according to claim 2, wherein said first roller raceway is formed
2 by interconnecting said lower horizontal track sections with said first track
3 sections, said first track sections transitioning said first roller raceway through
4 approximately ninety degrees into said vertical track assemblies, and wherein
5 said second roller raceway is formed by interconnecting said upper horizontal
6 track sections with said second track sections, said first roller raceway and said
7 second roller raceway providing for movement of said sectional door between
8 said closed vertical position and said open horizontal position.
- 1 4. A door system according to claim 1, wherein said transitional track members
2 include first receiving channels adapted to receive said vertical track sections and
3 second receiving channels adapted to receive said dual horizontal track
4 assemblies, said first track section being connected with said lower horizontal
5 track section and said second track section being connected with said upper

6 horizontal track section.

1 5. A door system according to claim 4, wherein said first track sections transition
2 through approximately ninety degrees to interconnect said lower horizontal track
3 sections with said vertical track sections.

1 6. A door system according to claim 4, wherein said second track sections include
2 elbow sections having distal ends positioned substantially adjacent said header,
3 said distal ends configured to carry said upper rollers, thereby vertically aligning
4 said top panel with the remainder of said panels, when said sectional door is in
5 said closed vertical position.

1 7. A door system according to claim 6, wherein said second track sections further
2 include horizontal portions and curved portions, said top panel articulating
3 according to the movement of said upper rollers through said horizontal portions,
4 said curved portions, and said elbow portions.

1 8. A door system according to claim 1, wherein said reverse angles of said vertical
2 track assemblies are joined with said header at flag angles.

1 9. A door system according to claim 8, wherein said flag angles support said
2 transitional track members, said transitional track members interconnecting said
3 vertical track sections and said dual horizontal track assemblies.

1 10. A door system according to claim 8 further comprising, a counterbalance system
2 connected to said sectional door and mounted on said flag angles.

1 11. A door system according to claim 1, wherein said vertical track assemblies
2 include an extension and a web, said extension and said web spacing a door stop
3 from said vertical track sections, thereby allowing said door stop to prevent
4 outward movement of said panels when said sectional door is in said closed
5 vertical position.

1 12. A door system according to claim 11, wherein said door stop is adapted to carry a
2 flexible seal, said flexible seal exerting pressure on said panels when said

3 sectional door is in said closed vertical position to prevent environmental
4 elements from infiltrating therebetween.

1 13. A door system according to claim 1, wherein said top panel includes a top panel
2 extension, and said upper rollers positioned on said top panel extension.

1 14. A door system according to claim 1, wherein said vertical track assemblies are of
2 one-piece construction.

1 15. A door system according to claim 1, wherein said dual horizontal track
2 assemblies are of one-piece construction.

1 16. A door system according to claim 1 further comprising, an operator for moving
2 said sectional door directly mounted on said header.

1 17. A door system according to claim 1, wherein said transition track members are
2 cast of either of metallic and non-metallic material.

1 18. A door system comprising, a sectional door having hinged panels for moving
2 between a closed vertical position and an open horizontal position, rollers
3 mounted on said panels, and a track system directing travel of said rollers when
4 moving said door between said closed vertical position and said open horizontal
5 position and having horizontal track assemblies, transitional track assemblies and
6 one piece vertical track assemblies including vertical track sections and reverse
7 angles forming part of a door mounting system.

1 19. The door system of claim 18 further comprising, a header spacing and joining
2 said reverse angles.

1 20. The door system of claim 19, wherein a portion of said reverse angles constitute
2 jambs which are connected to said header to permit preassembly thereof.

1 21. The door system of claim 18, wherein said vertical track sections and said reverse
2 angles are joined by a U-shaped central body portion.

- 1 22. A door system of claim 18, wherein said reverse angles have stop members to
2 prevent outward movement of said panels when said door is in said closed
3 vertical position.
- 1 23. A door system comprising, a sectional door having hinged panels for moving
2 between a closed vertical position and an open horizontal position, rollers
3 mounted on said panels and a track system directing travel of said rollers when
4 moving said door between said closed vertical position and said open horizontal
5 position and having vertical track assemblies, transitional track members and one
6 piece horizontal track assemblies having upper horizontal track sections and
7 lower horizontal track sections.
- 1 24. The door system of claim 23, wherein said upper horizontal track sections and
2 said lower horizontal track sections are joined by a U-shaped central body
3 portion.
- 1 25. The door system of claim 23, wherein said upper horizontal track sections have
2 first lips for retaining said rollers and said lower horizontal track sections have
3 second lips for retaining said rollers.
- 1 26. The door system of claim 25, wherein said second lips are inverted relative to
2 said first lips.
- 1 27. A door system comprising, a sectional door having hinged panels for moving
2 between a closed vertical position and an open horizontal position, rollers
3 mounted on said panels, and a track system directing travel of said track system
4 directing travel of said rollers when moving between said closed vertical position
5 and said open horizontal position and having vertical track assemblies, horizontal
6 track assemblies and transitional track members, and receiving channels for
7 coupling and aligning said vertical track assemblies and said horizontal track
8 assemblies with said transitional track members.
- 1 28. A door system of claim 27, wherein said transitional track members have
2 channels for telescopically receiving said vertical track assemblies.

- 1 29. A door system of claim 27, wherein said transitional track members have
2 channels for telescopically receiving horizontal track assemblies.
- 1 30. A door system of claim 27 further comprising, means for supporting said track
2 system.
- 1 31. A door system of claim 30, wherein said means for supporting said track system
2 includes flag angles.
- 1 32. A door system of claim 27, wherein said transitional track members are cast of
2 either of metallic and non-metallic material.
- 1 33. A door system comprising, a sectional door having hinged panels for moving
2 between a closed vertical position and an open horizontal position, rollers
3 mounted on said panels, and a track system directing travel of said rollers when
4 moving said door between said closed vertical position and said open horizontal
5 position and having vertical track assemblies, horizontal track assemblies and
6 one-piece transitional track members having first track sections and second track
7 sections.
- 1 34. A door system according to claim 33, wherein said vertical track assemblies are
2 one piece and have vertical track sections and reverse angles.
- 1 35. A door system according to claim 33, wherein said horizontal tack assemblies are
2 one piece dual track sections.